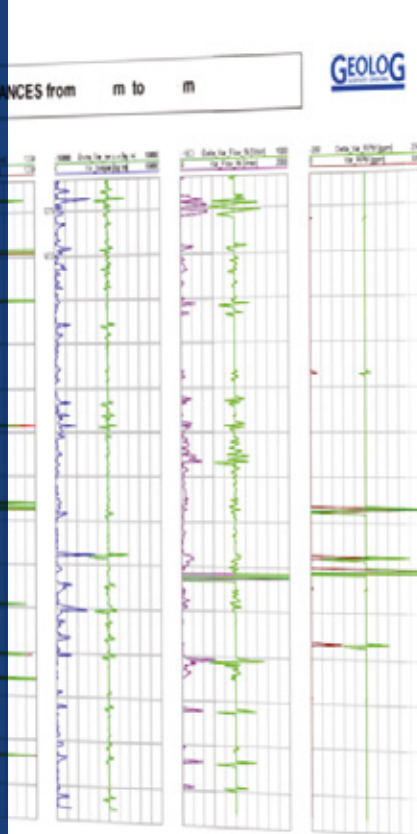


DrillBest

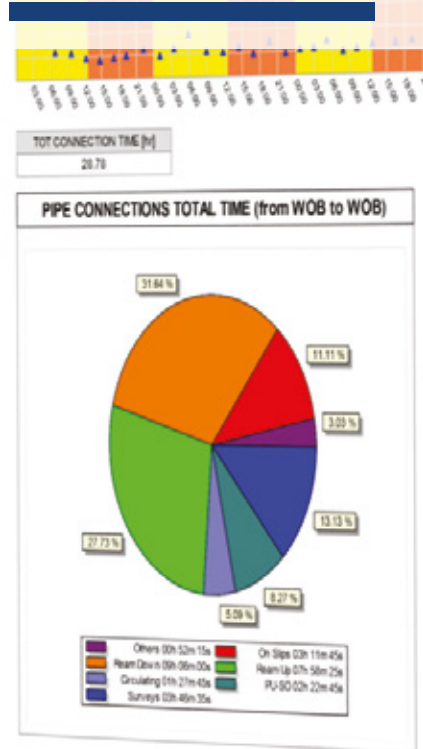
Utilizing surface logging data to improve drilling performance

DrillBest – GEOLOG's drilling performance optimization service provides a simple solution to highlight key areas of improvement with data collected independently through quality controlled surface measurements. DrillBest delivers tailor-made reports highlighting key data points in order to improve drilling efficiency, identify invisible non productive time and root causes while defining new KPIs. The results are achieved through close collaboration between GEOLOG and Client.



GEOLOG

SURFACE LOGGING



Benefits

- Customized reports to help identify invisible NPT
- Rig performance analysis and well to well performance trends
- Time saving evaluation and reduction of NPT
- Track KPIs to identify and improve drilling efficiency
- Reduce costs through KPI analysis
- Multiple rig monitoring

Challenges and Solutions

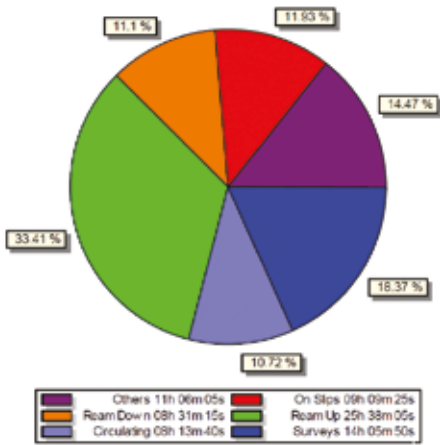
- To constantly improve drilling performance by evaluating vast amounts of available data
- Not enough details in standard reports to easily identify inefficiencies in operations
- *DrillBest automated reporting process is able to identify NPT utilizing independent and high quality data to define new benchmarks*
- *Provides reduction of overall off-bottom time, improving safety and reducing AFE costs*

Applications

DrillBest service can be provided on-site, at client offices or performed remotely for offshore as well as onshore projects. Predrill analysis can be performed utilizing historical data to establish KPIs and enhance performance on successive wells. The service is able to deliver maximum benefits when the learnings are applied to subsequent wells to reduce overall project costs.

DrillBest identifies NPT that was previously not visible with conventional reporting services.

Pipe connections total time (from WOB to WOB)



Average over 123 connections

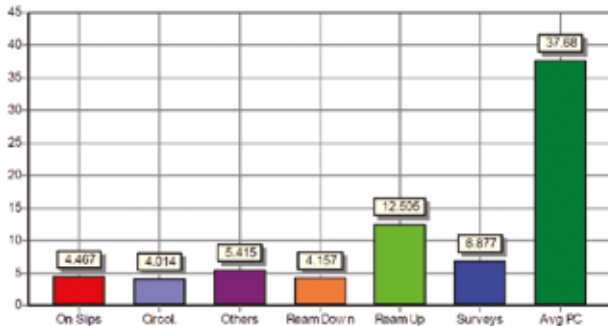
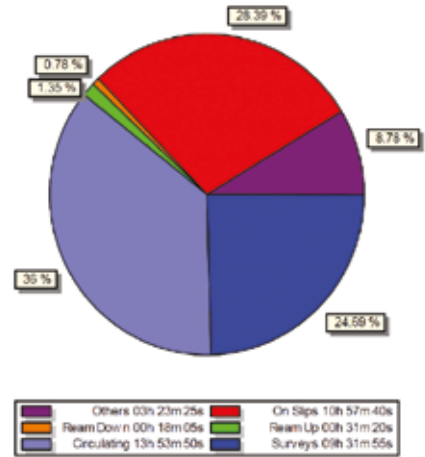


Figure 1. Original WOB to WOB time distribution.

Pipe connections total time (from WOB to WOB)



Average over 117 connections

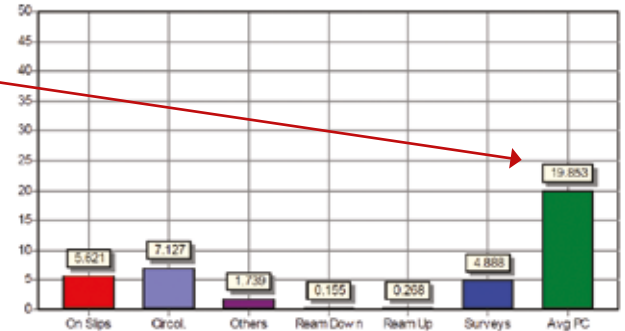


Figure 2. Reduction of time with new procedure.

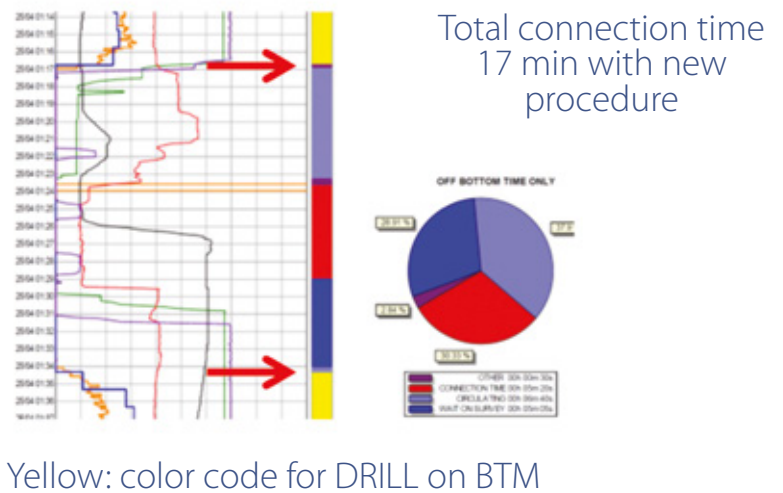
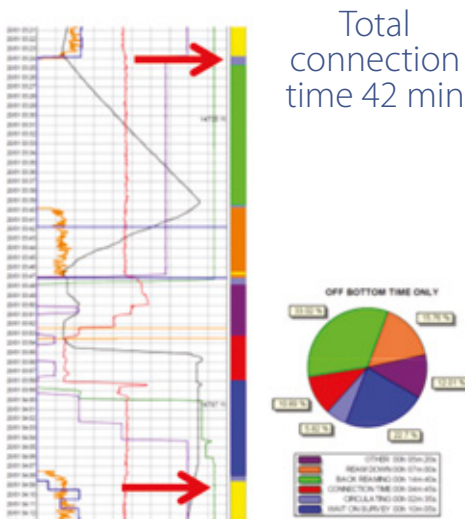


Figure 3. DrillBest report generated to compare improvements in NPT. Total time reduced from 42 min to 17 min through the implementation of a new procedure.

Customer requested a detailed analysis of the WOB to WOB time in order to identify and quantify the amount of time spent on each operation. After careful evaluation of the data, the well program was revised. The revised program drastically reduced the reaming and back reaming time. This resulted in the average time for a connection to be reduced from 39 min/conn to 19 min/conn. For the whole 12 1/4" phase 36 hours of rig time was saved.